



## Complete Summary

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### GUIDELINE TITLE

Viral hepatitis in pregnancy.

### BIBLIOGRAPHIC SOURCE(S)

American College of Obstetricians and Gynecologists (ACOG). Viral hepatitis in pregnancy. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2007 Oct. 15 p. (ACOG practice bulletin; no. 86). [69 references]

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Viral hepatitis during pregnancy, including:

- Hepatitis A
- Hepatitis B
- Hepatitis C
- Hepatitis D
- Hepatitis E

### GUIDELINE CATEGORY

Diagnosis  
Evaluation  
Management  
Prevention  
Risk Assessment  
Screening  
Treatment

## **CLINICAL SPECIALTY**

Gastroenterology  
Infectious Diseases  
Obstetrics and Gynecology

## **INTENDED USERS**

Physicians

## **GUIDELINE OBJECTIVE(S)**

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To describe the specific subtypes of hepatitis, their implications during pregnancy, the risk of perinatal transmission, and issues related to both treatment and prevention of infection

## **TARGET POPULATION**

Pregnant women

## **INTERVENTIONS AND PRACTICES CONSIDERED**

1. Recognition of clinical manifestations of hepatitis
2. General diagnostic tests
  - Serum transaminase levels
  - Serum bilirubin levels
3. Specific diagnostic/screening tests
  - Hepatitis A virus (HAV) immunoglobulin M (IgM) antibodies
  - Hepatitis B virus (HBV) surface antigen (HbsAg), HBV surface IgG antibody (anti-HBS)
  - Hepatitis C antibody (anti-HCV)
  - Hepatitis D virus (HDV) antigen in hepatic tissue, IgM antibody to HDV
  - Hepatitis E virus-specific antibodies
4. Referral of chronic hepatitis carriers to liver disease experts for treatment and management
5. Reporting to health departments
6. Routine prenatal screening of all pregnancy women for hepatitis B by HBsAg testing
7. Immunoprophylaxis of newborns born to hepatitis B carriers with hepatitis B immune globulin and hepatitis B vaccine

8. Vaccination of infants and at-risk individuals with hepatitis B vaccine, particularly health care workers.
9. Screening of at-risk pregnant women for HCV infection (routine screening considered but not recommended)
10. Considerations for amniocentesis, route of delivery and breastfeeding in women infected with hepatitis

## **MAJOR OUTCOMES CONSIDERED**

- Incidence of viral hepatitis infections: hepatitis A, B, C, D, and E
- Incidence of vertical perinatal transmission of viral hepatitis
- Incidence of accidental exposure of healthcare workers

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The MEDLINE database, the Cochrane Library, and the American College of Obstetricians and Gynecologists' own internal resources and documents were used to conduct a literature search to locate relevant articles published between January 1985 and February 2007. The search was restricted to articles published in the English language. Priority was given to articles reporting results of original research, although review articles and commentaries also were consulted. Abstracts of research presented at symposia and scientific conferences were not considered adequate for inclusion in this document. Guidelines published by organizations or institutions such as the National Institutes of Health and the American College of Obstetricians and Gynecologists were reviewed, and additional studies were located by reviewing bibliographies of identified articles.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force:

**I** Evidence obtained from at least one properly designed randomized controlled trial.

**II-1** Evidence obtained from well-designed controlled trials without randomization.

**II-2** Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

**II-3** Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

**III** Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

## **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Analysis of available evidence was given priority in formulating recommendations. When reliable research was not available, expert opinions from obstetrician-gynecologists were used. See also the "Rating Scheme for the Strength of Recommendations" field regarding Grade C recommendations.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Based on the highest level of evidence found in the data, recommendations are provided and graded according to the following categories:

**Level A** — Recommendations are based on good and consistent scientific evidence.

**Level B** — Recommendations are based on limited or inconsistent scientific evidence.

**Level C** — Recommendations are based primarily on consensus and expert opinion.

## **COST ANALYSIS**

Published cost analyses were of screening and vaccinating for viral hepatitis were reviewed.

## **METHOD OF GUIDELINE VALIDATION**

Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Practice Bulletins are validated by two internal clinical review panels composed of practicing obstetrician-gynecologists generalists and sub-specialists. The final guidelines are also reviewed and approved by the American College of Obstetricians and Gynecologists (ACOG) Executive Board.

## **RECOMMENDATIONS**

### **MAJOR RECOMMENDATIONS**

The grades of evidence (I-III) and levels of recommendation (A-C) are defined at the end of the "Major Recommendations" field.

**The following recommendations are based on good and consistent scientific evidence (Level A):**

- Routine prenatal screening of all pregnant women by hepatitis B surface antigen (HBsAg) testing is recommended.
- Newborns born to hepatitis B carriers should receive combined immunoprophylaxis consisting of hepatitis B immune globulin (HBIG) and hepatitis B vaccine within 12 hours of birth.
- Hepatitis B infection is a preventable disease, and all at-risk individuals, particularly health care workers, should be vaccinated. All infants should receive the hepatitis B vaccine series as part of the recommended childhood immunization schedule.
- Breastfeeding is not contraindicated in women with hepatitis A virus (HAV) infection with appropriate hygienic precautions, in those chronically infected with hepatitis B if the infant receives HBIG passive prophylaxis and vaccine active prophylaxis, or in women with hepatitis C virus (HCV) infection.

**The following recommendations are based on limited or inconsistent scientific evidence (Level B):**

- Routine prenatal HCV screening is not recommended; however, women with significant risk factors for infection should be offered antibody screening.
- Route of delivery has not been shown to influence the risk of vertical HCV transmission, and cesarean delivery should be reserved for obstetric indications in women with HCV infection.

**The following recommendations are based primarily on consensus and expert opinion (Level C):**

- The risk of transmission of hepatitis B associated with amniocentesis is low.
- Susceptible pregnant women who are at risk for hepatitis B infections should be specifically targeted for vaccination.

**Definitions:**

**Grades of Evidence**

**I** Evidence obtained from at least one properly designed randomized controlled trial.

**II-1** Evidence obtained from well-designed controlled trials without randomization.

**II-2** Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

**II-3** Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

**III** Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

**Levels of Recommendation**

**Level A** — Recommendations are based on good and consistent scientific evidence.

**Level B** — Recommendations are based on limited or inconsistent scientific evidence.

**Level C** — Recommendations are based primarily on consensus and expert opinion.

**CLINICAL ALGORITHM(S)**

None provided

**EVIDENCE SUPPORTING THE RECOMMENDATIONS**

**TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Accurate diagnosis and appropriate treatment and management of viral hepatitis in pregnant women

### POTENTIAL HARMS

Not stated

## CONTRAINDICATIONS

### CONTRAINDICATIONS

The use of ribavirin is contraindicated in pregnancy.

## QUALIFYING STATEMENTS

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These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Audit Criteria/Indicators  
Foreign Language Translations  
Patient Resources

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better  
Living with Illness  
Staying Healthy

## **IOM DOMAIN**

Effectiveness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

American College of Obstetricians and Gynecologists (ACOG). Viral hepatitis in pregnancy. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2007 Oct. 15 p. (ACOG practice bulletin; no. 86). [69 references]

### **ADAPTATION**

Not applicable: The guideline was not adapted from another source.

### **DATE RELEASED**

2007 Oct

### **GUIDELINE DEVELOPER(S)**

American College of Obstetricians and Gynecologists - Medical Specialty Society

### **SOURCE(S) OF FUNDING**

American College of Obstetricians and Gynecologists (ACOG)

### **GUIDELINE COMMITTEE**

American College of Obstetricians and Gynecologists (ACOG) Committee on Practice Bulletins - Obstetrics

### **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Not stated

### **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

### **GUIDELINE STATUS**

This is the current release of the guideline.



## **GUIDELINE AVAILABILITY**

Electronic copies: None available

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 4500, Kearneysville, WV 25430-4500; telephone, 800-762-2264, ext. 192; e-mail: [sales@acog.org](mailto:sales@acog.org). The ACOG Bookstore is available online at the [ACOG Web site](#).

## **AVAILABILITY OF COMPANION DOCUMENTS**

Proposed performance measures are included in the original guideline document.

## **PATIENT RESOURCES**

The following are available:

- Hepatitis B virus in pregnancy. Atlanta (GA): American College of Obstetricians and Gynecologists (ACOG); 2008. Available from the [American College of Obstetricians and Gynecologists \(ACOG\) Web site](#). Copies are also available in Spanish.
- Protecting yourself against hepatitis B. Atlanta (GA): American College of Obstetricians and Gynecologists (ACOG); 1998. Available from the [American College of Obstetricians and Gynecologists \(ACOG\) Web site](#). Copies are also available in Spanish.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 4500, Kearneysville, WV 25430-4500; telephone, 800-762-2264, ext. 192; e-mail: [sales@acog.org](mailto:sales@acog.org). The ACOG Bookstore is available online at the [ACOG Web site](#).

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## **NGC STATUS**

This NGC summary was completed by ECRI Institute on July 30, 2008. The information was verified by the guideline developer on August 20, 2008.

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